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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/067,827	02/08/2002	Satoshi Akutagawa	020161	9558

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EXAMINER

BOWERS, BRANDON

ART UNIT PAPER NUMBER

2825

DATE MAILED: 08/29/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/067,827

Applicant(s)

AKUTAGAWA ET AL.

Examiner

Brandon W Bowers

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 2/8/02.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 08 February 2002 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ 6) ☐ Other: _____

DETAILED ACTION

Priority

Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

Claim Objections

Claims 1,5,9-11,14, and 17-20 are objected to because of the following informalities: the double clause in "select(s/ing) from among a group of device of device patterns included in a region near a target pattern in a device forming region, as an alignment pattern in the device forming region, patterns whose barycenter positions..." makes it difficult to ascertain what is being selected. Perhaps move the clause --as an alignment pattern in the device forming region" so that it is after "are not changed" or to the end of the sentence. Appropriate correction is required.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

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1-3, 5-7 and 9-20
Claims ~~1-20~~ are rejected under 35 U.S.C. 102(e) as being anticipated by Tanaka et al., US Patent No. 6,567,972.

In reference to claims 1 and 5, Tanaka teaches a method of selecting reference patterns whose edges are not moved by OPE. If the edges of the pattern to be selected as a reference have not moved, the barycenter position of the pattern will not have moved in either a first or second direction. The reference pattern is then used to detect the to-be-corrected pattern (column 2, line 29-column 3, line 35). Accordingly, Tanaka teaches a pattern detecting method comprising: selecting patterns whose barycenter positions in a first direction or a first and second direction are not changed, setting a barycenter position of the alignment pattern in the first direction or the first and second direction as alignment reference coordinates, and detecting the target pattern based on the alignment reference coordinates.

In reference to claims 2-3 and 6-7, Tanaka is selecting the patterns as reference patterns if the edges of the pattern to be selected have not moved (column 2, line 29-column 3, line 35). Accordingly, Tanaka teaches wherein patterns which have the same distances from those which are adjacent on both sides in the first direction are selected as the alignment patterns and wherein from among patterns which are adjacent in the first direction, those which are separated from each other at such a distance that the patterns are not deformed by bringing the patterns close to each other and by a difference of density of the patterns are selected as the alignment patterns.

In reference to claim 9, Tanaka teaches checking the detected target pattern (column 2, line 29-column 3, line 35).

In reference to claim 10, Tanaka teaches correcting the detected target pattern (column 2, line 29-column 3, line 35).

In reference to claims 11-20, towards devices and computer programs containing the same limitations as outlined above in claims 1-3, 5-6, and 9-10, the same rejection applies.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 4 and 8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tanaka et al., US Patent No. 6,567,972 in view of prior admitted art.

Tanaka does not teach detecting the alignment pattern in the device forming region based on a reference position provided outside the device forming region after the alignment reference coordinates are determined and before the target pattern is detected based on the alignment reference coordinates. Admitted prior art teaches detecting the alignment pattern in the device forming region based on a reference position provided outside the device forming region after the alignment reference coordinates are determined and before the target pattern is detected based on the alignment reference coordinates (page 2, line 22 - page 3, line 2). According it would have been obvious for one skilled in the art at the time of invention to incorporate the

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teaches of admitted prior art for detecting the alignment pattern in the device forming region based on a reference position provided outside the device forming region after the alignment reference coordinates are determined and before the target pattern is detected based on the alignment reference coordinates with the teachings of Tanaka as described above in claims 1 and 5 because this is the method that has been employed in recent years to check a target pattern.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Brandon W Bowers whose telephone number is (703)305-4387. The examiner can normally be reached on 8:30 am until 5:00 pm Monday through Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Matthew Smith can be reached on (703)308-1323. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703)308-1782.


MATTHEW SMITH
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2800

BWB